

**Part Number: 74004E**

DataTuff® Industrial Ethernet Cat 7 Permanent Installation Cable



**Product Description**

DataTuff Industrial ETHERNET, Cat 7 4 Pair, 10 Gb/s, AWG 23(1), Solid, Foil + 80% Braid, PVC Jacket, UL AWM 20276

**Technical Specifications**

**Product Overview**

Environmental Space:	Indoor - Euroclass Eca
----------------------	------------------------

**Physical Characteristics (Overall)**

**Conductor**

AWG	Stranding	Material	No. of Pairs
23	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4
Conductor Size:	23 AWG

**Insulation**

Material	Nominal Diameter	Diameter +/- Tolerance
FPE - Foamed Polyethylene	1.45 mm	0.05 mm

Bonded-Pair:	No
--------------	----

**Color Chart**

Number	Color
Pair 1	White & Blue
Pair 2	White & Orange
Pair 3	White & Green
Pair 4	White & Brown

**Inner Shield Material**

Type	Material
Tape	Aluminum / Polyester

InnerShield, Table Note:	Aluminum outside
--------------------------	------------------

**Outer Shield Material**

Type	Material	Min. Coverage [%]
Braid	TC - Tinned Copper	65 %

**Outer Jacket Material**

Material	Color	Nominal Diameter	Diameter +/- Tolerance
PVC (UV stabilised and oil resistant)	Black	8 mm	0.3 mm

**Construction and Dimensions**

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %

**Cabling**

Description	
4 pairs twisted to cable core	
Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	12 MPa

## Electrical Characteristics

### Conductor DCR

Max. Conductor DCR	Max. DCR Unbalanced Within Pair [%]
75 Ohm/km	2 Ohm

### Capacitance

Max. Capacitance Unbalance	Max. Mutual Capacitance
1.6 pF/m	56 pF/m

### Impedance

Frequency [MHz]	Nominal Characteristic Impedance	Nominal Characteristic Tolerance	Nominal Input Impedance
4 - 100	100 Ohm	5 Ohm	100 +/- 15 Ohm
100 - 250	100 Ohm	22 Ohm	
250 - 600	100 Ohm	25 Ohm	

### Delay

Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
40 ns/100m	60 %

Coupling Attenuation Class:	Type Ib
Segregation class according EN50174-2:	c

### Transfer Impedance

Frequency [MHz]	Transfer Impedance
1 Mhz	Max. 5 mOhm/m
10 Mhz	Max. 5 mOhm/m
30 Mhz	Max. 30 mOhm/m
100 Mhz	100 mOhm/m

### Current

Element	Max. Recommended Current [A]
Conductor	1.4 A

### Voltage

Voltage Rating [V]
30 V AC

## Temperature Range

Installation Temp Range:	-15°C To +60°C
Storage Temp Range:	-40°C To +80°C
Operating Temp Range:	-40°C To +80°C

## Mechanical Characteristics

Oil Resistance:	IEC 60811-2-1
Max Recommended Pulling Tension:	80 N
Min Bend Radius (W/o Pulling Strength):	80 mm
Min Setting Radius:	40 mm

## Standards

ISO/IEC Compliance:	ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011 and ISO/IEC 24702
CPR Euroclass:	Eca
CENELEC Compliance:	EN 50173-1 Ed. 3:2011
Data Category:	Category 7
ANSI Compliance:	ANSI/TIA/EIA 568-C.2 (2009)
IEEE Specification:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4

## Applicable Environmental and Other Programs

EU RoHS Compliance Date (yyyy-mm-dd): 2016-01-22

## Flammability, LSOH, Toxicity Testing

ISO/IEC Flammability: IEC 60332-1-2

## Part Number

### Variants

Item #	Color
74004E.01305	Black
74004E.01500	Black
74004E.01B100	Black

Patent: <https://www.belden.com/resources/patents>

## History

Revision Number: 1

© 2019 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.